WHAT IS CLAIMED IS:

1. An acrylic foam-like pressure-sensitive adhesive tape comprising:

(a) a layer of an acrylic foam-like backing comprising

(i) from about 88% to about 92% of an acrylic polymer comprising:

from about 35% to about 45% of a first alkyl acrylate monomer having alkyl groups which contain from 4 to 12 carbon atoms,

from about 30% to about 40% of a second alkyl acrylate monomer having alkyl groups which contain from 4 to 12 carbon atoms,

from about 6% to about 10% of a first monoethylenically unsaturated polar copolymerizable monomer, and

from about 1% to about 2% of a second monoethylenically unsaturated polar copolymerizable monomer; and

(ii) from about 8% to about 12% of hollow glass microspheres dispersed evenly in said polymer; and

(b) at least one layer of a pressure-sensitive adhesive.

2. The acrylic foam-like pressure-sensitive adhesive tape according to claim 1, wherein the acrylic polymer includes from about 0.3% to about 0.5% of initiator.

3. The acrylic foam-like pressure-sensitive adhesive tape according to claim 2, wherein the initiator comprises at least one photoinitiator.

4. The acrylic foam-like pressure-sensitive adhesive tape according to claim 1, wherein the acrylic polymer includes from about 0.05% to about 0.07% of a crosslinker/chain extender.

5. The acrylic foam-like pressure-sensitive adhesive tape according to claim 4, wherein the crosslinker/chain extender is a multifunctional acrylate.

6. The acrylic foam-like pressure-sensitive adhesive tape according to claim 4, wherein the crosslinker/chain extender is a multi-ethylenically unsaturated copolymerizable monomer containing at least two carbon-carbon double bonds.

7. The acrylic foam-like pressure-sensitive adhesive tape according to claim 4, wherein:

the crosslinker/chain extender is taken from the group consisting of ethlene glycol diacrylate, triethylene glycol diacrylate, 1,4-butanediol diacrylate, 1,6-hexanediol diacrylate, trimethylolpropane triacrylate, pentaerythritol triacrylate, tetraethylene glycol diacrylate, and methacrylates and combinations thereof.

8. The acrylic foam-like pressure-sensitive adhesive tape according to claim 1, wherein the acrylic polymer includes from about 1% to about 2% of a filler.

9. The acrylic foam-like pressure-sensitive adhesive tape according to claim 8, wherein filler is a fumed silica.

10. The acrylic foam-like pressure-sensitive adhesive tape according to claim 8, wherein filler is a surface modified silica.

11. The acrylic foam-like pressure-sensitive adhesive tape according to claim 1, wherein:

the first alkyl acrylate monomer is isooctylacrylate,

the second alkyl acrylate monomer is 2-ethylhexyl acrylate,

the first monoethylenically unsaturated polar copolymerizable monomer is acrylic acid,

the second monoethylenically unsaturated polar copolymerizable monomer is acrylamide, and

the hollow glass microspheres are borosilicate glass.

12. The acrylic foam-like pressure-sensitive adhesive tape according to claim 11, wherein the acrylic polymer further comprises:

from about 0.3% to about 0.5% of initiator,

from about 1% to about 2% of a filler, and

from about 0.05% to about 0.07% of a crosslinker/chain extender.

13. The acrylic foam-like pressure-sensitive adhesive tape according to claim 12, wherein the initiator comprises at least one photoinitiator.

14. The acrylic foam-like pressure-sensitive adhesive tape according to claim 13, wherein the photoinitiator is benzoin ethyl ether.

15. The acrylic foam-like pressure-sensitive adhesive tape according to claim 11, wherein the filler is fumed silica.

16. The acrylic foam-like pressure-sensitive adhesive tape according to claim 11, wherein the filler is a surfaced modified silica.

17. The acrylic foam-like pressure-sensitive adhesive tape according to claim 11, wherein the crosslinker/chain extender is 1,4 butanediol diacrylate.

18. The acrylic foam-like pressure-sensitive adhesive tape according to claim 11, wherein the acrylic foam-like backing comprises:

from about 40% to about 41% isooctylacrylate;

from about 36% to about 37% 2-ethylhexyl acrylate;

from about 8% to about 9% acrylic acid;

from about 1% to about 2% acrylamide; and

from about 10% to about 11% borosilicate glass.

19. The acrylic foam-like pressure-sensitive adhesive tape according to claim 18, wherein the acrylic foam-like backing further comprises:

from about 0.35% to about 0.45% benzoin ethyl ether;

from about 1% to about 2% fumed silica; and

from about 0.055% to about 0.065% 1,4 butanediol diacrylate.

20. The acrylic foam-like pressure-sensitive adhesive tape according to claim 1, wherein the foam-like backing further comprises:

a sufficient amount of colorant to depart color to the adhesive tape.

21. A process for making a pressure-sensitive adhesive tape having an acrylic foam-like backing, the process comprising the steps of:

(1) preparing an oligomer while excluding oxygen and partially polymerizing the oligomer composition wherein the oligomer comprises from about 45% to about 55% of a first alkyl acrylate monomer having alkyl groups which contain from 4 to 12 carbon atoms, from about 35% to about 45% of a second alkyl acrylate monomer having alkyl groups which contain from 4 to 12 carbon atoms, from about 3% to about 4% of a first monoethylenically substituted monomer, and from about 0.04% to about 0.06% of at least one photoinitiator;

(2) forming a coating composition comprising from about 75% to about 80% by weight of said oligomer and a mixture having a first polar copolymerizable monoethylenically substituted monomer and a second polar copolymerizable monoethylenically substituted monomer having a combined weight percentage of from about 6% to about 9%, from about 0.3% to about 0.5% of at least one photoinitiator, from about 1% to about 2% filler, from about 0.05% to about 0.07% of a crosslinker/chain extender, and from about 8% to about 12% hollow glass microspheres, wherein, said coating composition is formed under a vacuum in the absence of oxygen and has a viscosity between 500 and 20,000 cps;

(3) coating the composition onto a first liner and having a second liner contiguously cover the composition on the first liner thereby excluding air;

(4) polymerizing the composition between the liners forming an essentially uniform foam-like sheet having glass microspheres evenly distributed therethrough; and

(5) coating at least one surface of the foam-like sheet with a pressure-sensitive adhesive.

22. The process of claim 21 wherein the step for coating at least one surface of the foam-like sheet with an appropriate pressure-sensitive adhesive comprises the steps of:

(1) applying a primer to at least one surface of the foam-like sheet;

(2) coating each surface having primer thereon with an appropriate pressure-sensitive adhesive.

23. The process of claim 21 wherein the step for coating at least one surface of the foam-like sheet with an appropriate pressure-sensitive adhesive comprises the steps of:

(1) applying a primer to one surface of the foam-like sheet;

(2) coating the surface having primer thereon with an appropriate pressure-sensitive adhesive; and

(3) coating the surface without primer thereon with an appropriate pressure-sensitive adhesive.

24. The process of claim 21 wherein the step for preparing the oligomer comprises the steps of:

(1) mixing about 51% isooctylacrylate, about 45% 2-ethylhexyl acrylate, about 3.5% acrylic acid, and about 0.04% benzoin ethyl ether

(2) excluding oxygen from the monomer mixture by bubbling nitrogen therethrough; and

(3) extruding monomer mixture through a 4" diameter glass tube under ultraviolet radiation sufficient to initiate partial polymerization resulting in an oligomer having a viscosity of about 80 cps.

25. The process of claim 21 wherein:

the filler is fumed silica, the photoinitator is benzoin ethyl ether, and the cross linker/chain extender is 1,4 butanediol diacrylate.

26. The process of claim 21, wherein:

in the mixing step, the mixture having a first polar copolymerizable monoethylenically substituted monomer is acrylic acid and a second polar copolymerizable monoethylenically substituted monomer is acrylamide, the photoinitiator is benzoin ethyl ether, the filler is fumed silica, the crosslinker/chain extender is 1,4 butanediol diacrylate, and the hollow glass microspheres are borosilicate glass.

27. The process of claim 26, wherein the mixture comprises:

from about 5.5% to about 6.5 % acrylic acid;

from about 1% to about 2 % acrylamide;

from about 0.35% to about 0.45 % benzoin ethyl ether;

from about 1% to about 2% fumed silica;

from about 0.055% to about 0.065% 1,4 butanediol diacrylate; and

from about 10% to about 11% borosilicate glass wherein the borosilicate glass is from about 40 to about 70 microns.

28. The process of claim 22, wherein the primer is composed of a mixture of polyamide, isopropyl alcohol and toluene.

29. The process of claim 28, wherein the primer is composed of a mixture of about 10±1% polyamide, about 45±1% isopropyl alcohol, and about 45±1% toluene.

30. The process of claim 22, wherein the primer includes polyamide solution and emulsion, nitrile rubber based solution and emulsion, natural rubber based solution and emulsion, ethylene-propylene copolymer and ethylene-propylene-diene monomer terpolymer rubber based solution and emulsion, poly (ethylene-co-vinyl acetate solution and emulsion, poly(ethylene-co-vinyl acetate and alcohol) solution and emulsion, silane modified rubber and elastomer solutions, and combinations thereof.

31. The process of claim 21, wherein the step for polymerizing the composition between the liners utilizes two opposing banks of ultraviolet lamps.

32. The process of claim 21, wherein the crosslinker/chain extender is taken from the group consisting of ethlene glycol diacrylate, triethylene glycol diacrylate, 1,4-butanediol diacrylate, 1,6-hexanediol diacrylate, trimethylolpropane triacrylate, pentaerythritol triacrylate, tetraethylene glycol diacrylate, and methacrylates and combinations thereof.

33. A process of making a pressure-sensitive adhesive tape having an acrylic foam-like backing, the method comprising the steps of:

(a) making an acrylic foam-like backing comprising the steps of

(1) preparing an oligomer composition which has a viscosity of about 80 cps by mixing the composition, bubbling an inert gas through the composition, and running the composition through a glass tube while exposing the oligomer to ultraviolet radiation wherein the oligomer composition consists essentially of about 51% isooctylacrylate, about 45% 2-ethylhexyl acrylate, about 3.5% acrylic acid, and about 0.04% benzoin ethyl ether;

(2) mixing 80% oligomer composition with about 6% acrylic acid, about 1.5% acrylamide, about 0.3% benzoin ethyl ether, about 1.6% fumed silica, about 0.06% 1,4 butanediol diacrylate; and about 10.5% borosilicate glass wherein the borosilicate glass is from about 40 to about 70 microns in a high speed mixer;

(3) excluding oxygen by bubbling an inert gas through the resultant mixture while pulling a vacuum sufficient to eliminate voids therethrough

resulting a composition having a viscosity between 500 and 20,000 cps

(4) coating the composition at a rate of about 5 meters per minute onto a first liner having a second liner cover the composition on the first liner thereby excluding air; and

(5) exposing the composition on each side through the liners to ultraviolet radiation to polymerize the composition between the liners forming an essentially uniform foam-like sheet having glass microspheres evenly distributed therethrough; and

(6) coating at least one surface of the foam-like sheet with a pressure-sensitive adhesive.

34. The process of claim 33 wherein the step for coating at least one surface of the foam-like sheet with a pressure-sensitive adhesive comprises the steps of:

(1) applying a primer to at least one surface of the foam-like sheet;

(2) coating each surface having primer thereon with a pressure-sensitive adhesive.

35. The process of claim 33 wherein the step for coating at least one surface of the foam-like sheet with a pressure-sensitive adhesive comprises the steps of:

(1) applying a primer to one surface of the foam-like sheet;

(2) coating the surface having primer thereon with a pressure-sensitive adhesive; and

(3) coating the surface without primer thereon with a pressure-sensitive adhesive.

36. The process of claim 33, wherein the step of exposing the composition to ultraviolet light further consists of cooling the polymerized composition.

37. The process of claim 33, wherein the step for exposing the composition to ultraviolet light consists of pulling the coating composition and two liners between two opposing banks of ultraviolet light.

38. The process of claim 37, further comprising a step for cooling the composition between the liners as the polymerization step is being executed.

39. The process of claim 33, wherein the step for coating the adhesive comprises laminating the adhesive to at least one surface of the backing.

40. The process of claim 34, wherein the step for coating the adhesive comprises laminating the adhesive to the surface having primer thereon.